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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/725,160

12/01/2003

Lei Wu

ART-00104.P.1.2

4793

24232 7590 06/18/2007  
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EXAMINER
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YANG, NELSON C

ART UNIT	PAPER NUMBER
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1641

MAIL DATE	DELIVERY MODE
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06/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/725,160

Applicant(s)

WU ET AL.

Examiner

Nelson Yang

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2007.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 49-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 49-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/399,299.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's affidavit filed April 5, 2007 is acknowledged and has been considered.
2. Claims 49-68 are currently pending.

### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
4. Although applicant has support in the foreign priority papers for the specific method of manipulation of molecules linked to magnetic microbeads, applicant does not have support for the broader genus of manipulating all magnetic particles. As a result the current claims, specifically claim 49, would include embodiments (magnetic particles that are not target molecules linked to magnetic microbeads) that do not have priority under 35 U.S.C. 119(a)-(d), and foreign priority is not granted to the claims as currently recited.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 49-68 are rejected under 35 U.S.C. 102(e) as being anticipated by Burdon et al. [US 6,572,830].

Art Unit: 1641

With respect to claims 49, 59, Burdon et al. teach a device comprising a pair of electromagnets aligned generally perpendicularly to a channel so as to direct magnetic flux into channel (column 26, line 63 – column 27, line 8, fig. 34), wherein the electromagnetic comprises a core defined by stacked vias in layers that have been filled with high permeability material (column 27, lines 9-15), the layers being between 50 to 250 microns thick (column 7, lines 1-6). By applying current to electromagnet 1220 and/or electromagnet 1222 (see fig. 34), magnetic microspheres present in the fluid in channel may be moved around or held in place, as may be desired (column 27, lines 25-43).

7. With respect to claims 50-52, 60-62, Burdon et al. teach that DNA molecules can be attached to magnetic microspheres through the use of chemical reaction surfaces or binding sites (column 20, lines 8-11).

8. With respect to claims 53, 63, Burdon et al. teach that the device can be used for manipulating magnetic particles by attracting the particles to each of the active sources, or to a particular source that is activated (column 27, 27-35), which would be considered magnetophoresis.

9. With respect to claim 54, 64, Burdon et al. teach that the coils may be energized sequentially to move magnetic microspheres, such that one electromagnetic may be turned on and another be turned off and vice versa, to move magnetic microspheres from coil to coil (switching means) (column 27, lines 63-67).

10. With respect to claims 55, 65, Budron et al. teach cores defined by stacked vias in layers (terminal structures) (column 27, lines 8-20).

11. With respect to claims 56, 66, Budron et al. teach that a plurality of cavities (dips) may be formed in the layers of the device (column 23, lines 1-8)
12. With respect to claims 57, 58, 67, 68, The electromagnetic units may be in a substantially horizontal configuration (fig. 35, where the coils are would around the channel) or vertical configuration (fig. 34, where the electromagnetic units are underneath the channel).

### ***Response to Arguments***

13. Applicant's arguments filed April 5, 2007 have been fully considered but they are not persuasive. In particular, although applicant has support in the foreign priority papers for the specific method of manipulation of molecules linked to magnetic microbeads, applicant does not have support for the broader genus of manipulating all magnetic particles. As a result the current claims, specifically claim 49, would include embodiments (magnetic particles that are not target molecules linked to magnetic microbeads), and foreign priority is not granted to the claims as currently recited. It is noted, however, that upon amendment of the claims to be commensurate in scope with the invention disclosed in the foreign priority papers, foreign priority would be granted.

### ***Conclusion***

14. No claims are allowed.
15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

Art Unit: 1641

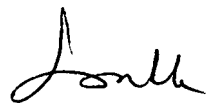
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571) 272-0826. The examiner can normally be reached on 8:30-5:00.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nelson Yang  
Patent Examiner  
Art Unit 1641

  
LONG V. LE 06/08/07  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600